

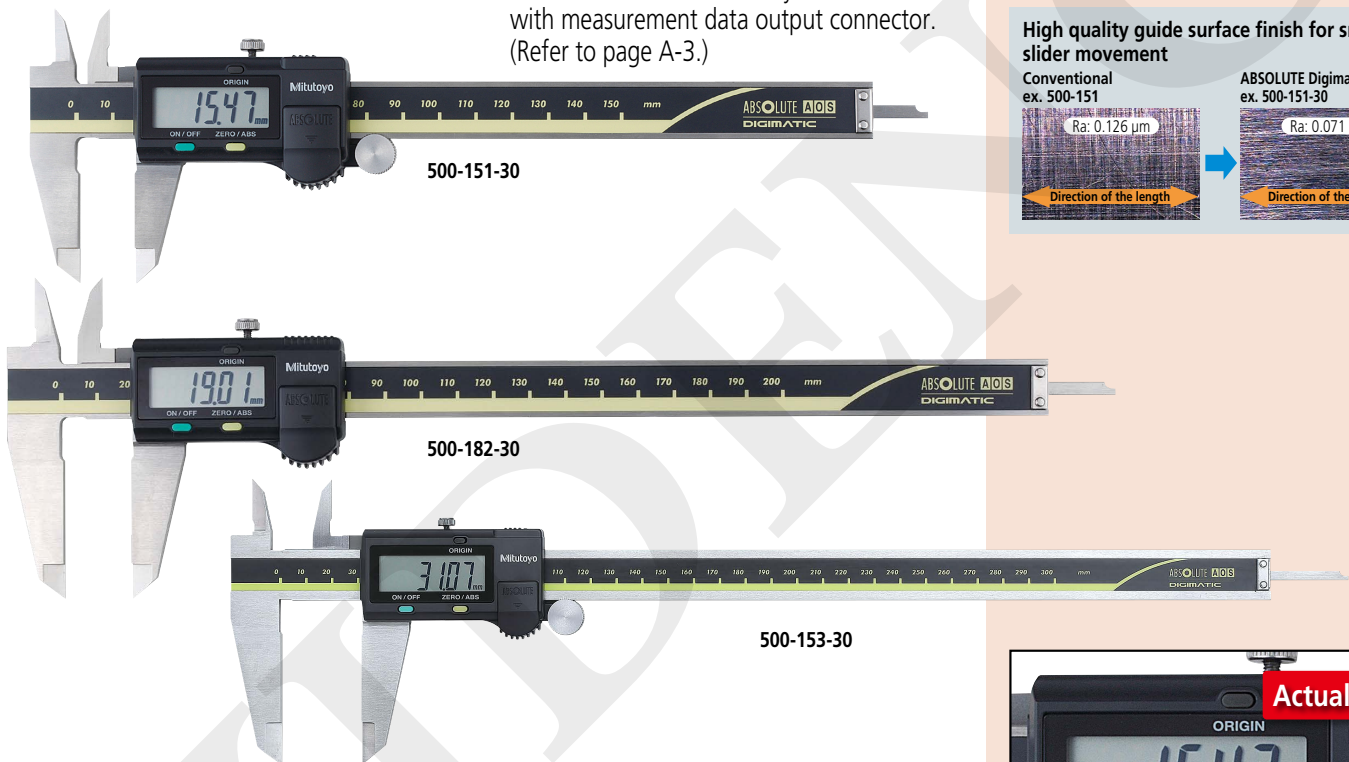
Calipers

An industry standard measuring tool

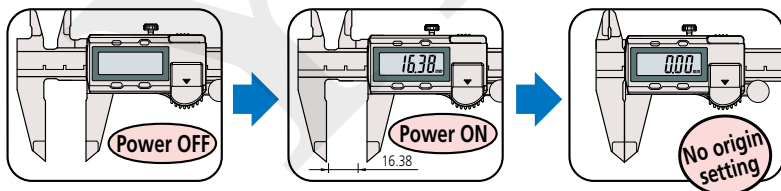
ABSOLUTE Digimatic Caliper SERIES 500 — with exclusive ABSOLUTE Encoder Technology

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- An ABSOLUTE electromagnetic induction linear encoder system is incorporated.
- New ergonomic design with finger rest.
- The ZERO/ABS button allows the display to be Zero-Set at any slider position along the scale for comparison measurements. Scale overspeed-error has been eliminated for maximum reliability.
- Large and clear LCD readout.
- Smooth slider movement makes for comfortable operation.
- Extended battery life of Approx. 5 years due to low current integrated circuit (except for 0 to 300 mm/0 to 12 inch models).
- Allows step measurement.
- Carbide-tipped jaw calipers are optimal for rough finished parts, castings, grinding stones, etc.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector. (Refer to page A-3.)



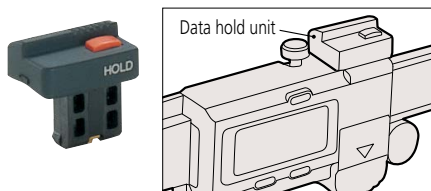
No need to reset the origin after switching on



Optional accessories

Dedicated for the models equipped with a digimatic output function. For details, refer to page A-21.

959143: Data hold unit



Connecting cables for IT / DP / MUX

- 959149: SPC cable with data button (1 m)
- 959150: SPC cable with data button (2 m)

USB Input Tool Direct

- 06AFM380C: SPC cable for USB-ITN-C (2 m)

Connecting cables for U-WAVE-T

- 02AZD790C: SPC cable with data button (160 mm)
- 02AZE140C: SPC cable for foot switch

Wireless data output **U-WAVE™**
U-WAVE-TC: 264-621 (Buzzer type)

- U-WAVE-TCB Transmitter (Mitutoyo Bluetooth[®] U-WAVE) 264-625 (Buzzer type)

Refer to page A-10 for details.

Connecting unit for U-WAVE-TC/TCB 02AZF300 (Buzzer type)

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink[®] (refer to page A-25 for details).

ABSOLUTE™



An inspection certificate is supplied as standard. Refer to page U-9 for details.

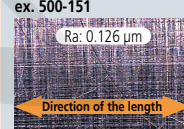
Technical Data

- Resolution: 0.01 mm or 0.0005 in/0.01 mm
- Scale type: ABSOLUTE electromagnetic induction linear encoder
- Max. response speed: Unlimited
- Battery: SR44 (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 5 years under normal use

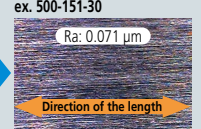
Smooth slider movement makes for comfortable operation.

High quality guide surface finish for smooth slider movement

Conventional ex. 500-151



ABSOLUTE Digimatic Caliper ex. 500-151-30



Remarkably easy to read display

Functions

Absolute measurement: After power is turned ON, measurement can be started without zero-setting if origin-setting was previously performed. The Absolute origin position can be changed by the ORIGIN button.

Incremental measurement: Display can be set to zero at any arbitrary position for comparative measurements.

Low-voltage alert: If the battery voltage becomes low, a "B" appears in the display to alert the user before measurement is no longer possible. A battery change advisory alert precedes this alert.

Data output: By using the connecting cable (optional), measurement data can be output.

Data hold: By using the data hold unit (optional), the displayed value can be held. This cannot be used with the data output function.

SPECIFICATIONS

Metric							
Order No.	Range (mm)	Maximum permissible error (mm)*2		Mass (g)	Depth bar	Fine adjustment	Remarks
		E_{MPE}	S_{MPE}				
500-150-30	0 - 100	±0.02	±0.04	143	ø1.9 mm rod	with thumb roller	—
500-180-30*1						—	
500-151-30						—	
500-154-30	0 - 150	±0.02	±0.04	168	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-155-30						—	Carbide-tipped jaws for outside and inside measurement
500-158-30						—	—
500-181-30*1						—	—
500-152-30	0 - 200	±0.02	±0.04	198	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-156-30						—	Carbide-tipped jaws for outside and inside measurement
500-157-30						—	—
500-182-30*1						—	—
500-153-30	0 - 300	±0.03	±0.05	350	—	with thumb roller	—

*1 Without SPC data output

*2 Partial Surface Contact Error, E_{MPE} and Shift Error, S_{MPE} are terms (notations) used in ISO 13385-1:2019.

Inch / Metric								
Order No.	Range (in)	Maximum permissible error*2		Mass (g)	Depth bar	Fine adjustment	Remarks	
		E_{MPE}	S_{MPE}					
500-170-30	0 - 4	—	—	143	ø0.075 inch rod	with thumb roller	—	
500-195-30*1								—
500-171-30								—
500-174-30	0 - 6	±0.001 in/ ±0.02 mm	±0.002 in/ ±0.04 mm	168	ø0.075 inch rod	with thumb roller	Carbide-tipped jaws for outside measurement	
500-175-30							—	Carbide-tipped jaws for outside and inside measurement
500-178-30							—	—
500-196-30*1							—	—
500-159-30*1	0 - 8	±0.001 in/ ±0.02 mm	±0.002 in/ ±0.04 mm	198	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-160-30*1							—	Carbide-tipped jaws for outside and inside measurement
500-172-30							—	—
500-176-30							—	—
500-177-30	0 - 12	±0.0015 in/ ±0.03 mm	±0.0025 in/ ±0.05 mm	350	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-197-30*1							—	Carbide-tipped jaws for outside and inside measurement
500-163-30*1							—	—
500-164-30*1							—	—
500-173-30	0 - 12	±0.0015 in/ ±0.03 mm	±0.0025 in/ ±0.05 mm	350	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-167-30							—	Carbide-tipped jaws for outside and inside measurement
500-168-30							—	—
500-193-30*1							—	—
500-165-30*1	0 - 12	±0.0015 in/ ±0.03 mm	±0.0025 in/ ±0.05 mm	350	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-166-30*1							—	Carbide-tipped jaws for outside and inside measurement

*1 Without SPC data output

*2 Partial Surface Contact Error, E_{MPE} and Shift Error, S_{MPE} are terms (notations) used in ISO 13385-1:2019.

DIMENSIONS

With thumb roller

Unit: mm

Without thumb roller

Range (mm)	A	B	C	D	H	L
0 - 100	16.5	21	14.5	40	16	182
0 - 150	16.5	21	14.5	40	16	233
0 - 200	20	24.5	18	50	16	290
0 - 300	22	27.5	19.8	64	20	404

Jaw thickness: 3.5 mm for 0 to 100 mm/0 to 150 mm/0 to 200 mm models and 3.8 mm for 0 to 300 mm model